

**Advanced Research
Projects Agency-
Energy**

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**Advanced Research Projects Agency - Energy
(\$K)**

FY 2019 Enacted	FY 2020 Enacted	FY 2021 Request	FY 2021 Request vs FY 2020 Enacted
366,000	425,000	-310,744	-735,744

The U.S. Department of Energy's Advanced Research Projects Agency-Energy (ARPA-E) was established by the America COMPETES Act of 2007 (Public Law 110–69), as amended. The FY 2021 Budget proposes to eliminate ARPA-E while incorporating APRA-E’s approach to technology development into the execution of applied energy office funding. The Budget requests no additional appropriation for new ARPA-E competitive solicitations and requests the cancellation of \$332 million of unobligated balances. The Budget requests \$21.256 million for administration expenses to support close-out activities and the oversight of obligations carried forward on October 1, 2020.

Public Law Authorizations

- P.L. 95-91, “Department of Energy Organization Act” (1977)
- P.L. 109-58, “Energy Policy Act of 2005”
- P.L. 110-69, “America COMPETES Act of 2007”
- P.L. 111-358, “America COMPETES Reauthorization Act of 2010”

Overview

As defined by its authorization under the America COMPETES Act, the Advanced Research Projects Agency-Energy (ARPA-E) catalyzes transformational energy technologies to enhance the economic and energy security of the United States. ARPA-E funds high-potential, high-impact energy projects that are too risky to attract private sector investment but could significantly advance the ways we generate, store, distribute and use energy. ARPA-E has developed a unique approach to federally funded technology development, and the Budget aims to adopt aspects of that approach to other offices within DOE’s research and development R&D organization, rather than maintain an independent ARPA-E office.

ARPA-E focuses on energy technologies that can be meaningfully advanced with a targeted investment over a defined period of time. ARPA-E’s rigorous program design, competitive project selection process, and hands-on engagement, ensure thoughtful expenditures while empowering America’s energy researchers with funding, technical assistance, and market awareness.

ARPA-E was established by the America COMPETES Act of 2007 following a recommendation by the National Academies in the *Rising above the Gathering Storm* report. As of March 2019, ARPA-E has funded over 800 projects with approximately \$2.0 billion through focused programs and open funding solicitations.

Highlights and Major Changes in the FY 2021 Budget Request

The FY 2021 Budget requests no additional appropriation for new competitive solicitations. The Budget requests \$21.256 million for program direction to support close-out activities and to manage obligations carried forward into FY 2021. ARPA-E will not invest in new R&D technologies in FY 2021 and as such will not make additional Small Business Innovation Research / Small Business Technology Transfer (SBIR/STTR) program investments. However, the SBIR/STTR program office will adopt best practices and lessons learned from ARPA-E to execute SBIR/STTR funds transferred from the applied programs. The FY 2021 Budget Request also includes the cancellation of \$332 million of ARPA-E unobligated balances.

**Advanced Research Projects Agency - Energy
Funding (\$K)**

	FY 2019 Enacted	FY 2020 Enacted	FY 2021 Request	FY 2021 Request vs FY 2020 Enacted
ARPA-E Projects	334,750	390,000	0	-390,000
Program Direction	31,250	35,000	21,256	-13,744
Subtotal, Advanced Research Projects Agency - Energy	366,000	425,000	21,256	-403,744
Cancellation of Prior Year ARPA-E Project Funds	0	0	-332,000	-332,000
Total, Advanced Research Projects Agency - Energy	366,000	425,000	-310,744	-735,744
Federal FTEs	60	64	52	-12

**ARPA-E Projects
Funding (\$K)**

ARPA-E Projects:

Transportation Systems
Stationary Power Systems

Subtotal, ARPA-E Projects

Cancellation

FY 2019 Enacted	FY 2020 Enacted	FY 2021 Request	FY 2021 Request vs FY 2020 Enacted
167,375	195,000	0	-195,000
167,375	195,000	0	-195,000
334,750	390,000	0	-390,000
0	0	-332,000	-332,000
334,750	390,000	-332,000	-722,000

SBIR/STTR

- FY 2019 Enacted: \$12,218 total (SBIR \$10,712 / STTR \$1,506)
- FY 2020 Enacted: \$14,235 total (SBIR \$12,480 / STTR \$1,755)
- FY 2021 Request: \$0 total (SBIR \$0 / STTR \$0)

ARPA-E Projects
Explanation of Major Changes (\$K)

	FY 2021 Request vs FY 2020 Enacted
<p>Transportation Systems: The FY 2021 Budget proposes to eliminate ARPA-E while incorporating APRA-E’s approach to technology development into the execution of applied energy office funding. The Budget requests no additional appropriation for new ARPA-E competitive solicitations and requests the cancellation of \$332 million of unobligated balances.</p>	-361,000
<p>Stationary Power Systems: The FY 2021 Budget proposes to eliminate ARPA-E while incorporating APRA-E’s approach to technology development into the execution of applied energy office funding. The Budget requests no additional appropriation for new ARPA-E competitive solicitations and requests the cancellation of \$332 million of unobligated balances.</p>	-361,000
<hr/> <p>Total, ARPA-E Projects</p> <hr/>	-722,000

**Program Direction
Funding (\$K)**

	FY 2019 Enacted	FY 2020 Enacted	FY 2021 Request	FY 2021 Request vs FY 2020 Enacted
Washington Headquarters				
Salaries and Benefits*	10,500	11,500	9,456	-2,044
Travel	1,500	1,750	800	-950
Support Services	14,175	16,000	7,300	-8,700
Other Related Expenses	5,075	5,750	3,700	-2,050
Subtotal, Program Direction	31,250	35,000	21,256	-13,744
Use of Prior Year Reprogrammed Funds	0	0	0	0
Total, Program Direction	31,250	35,000	21,256	-13,744
Federal FTEs	60	64	52	-12
Support Services				
Technical Support	4,961	5,600	2,555	-3,045
Management Support	9,214	10,400	4,745	-5,655
Total, Support Services	14,175	16,000	7,300	-8,700
Other Related Expenses				
Rental payments to GSA	2,200	2,420	2,420	0
Communications, utilities, and misc. charges	425	500	240	-260
Printing and reproduction	50	70	20	-50
Other services from non-Federal sources	700	800	500	-300
Other goods and services from Federal sources	1,650	1,900	500	-1,400
Supplies and materials	50	60	20	-40
Total, Other Related Expenses	5,075	5,750	3,700	-2,050

*Salaries and Benefits: The request reflects a 1% pay raise for federal staff, FERS increase, and awards pool funding increase in FY 2021.

Program Direction

Activities and Explanation of Changes

FY 2020 Enacted	FY 2021 Request	Explanation of Changes FY 2021 Request vs FY 2020 Enacted
Program Direction \$35,000,000	\$21,800,000	- \$13,200,000
Salaries and Benefits		
At the FY 2020 Enacted level, ARPA-E anticipates needing up to 64 Federal FTEs.	At the FY 2021 Request level, ARPA-E anticipates needing up to 52 Federal FTEs.	- \$2,044,000: FTEs will decrease as ARPA-E transitions to close-out activities and ceases new program development.
Travel		
At the FY 2020 Enacted level, ARPA-E Program Directors and Technology-to-Market advisers will visit performers regularly as part of ARPA-E's hands-on engagement, which is the primary component of ARPA-E travel. The number of site visits will be commensurate with the number of ongoing projects.	At the FY 2021 Request level, ARPA-E Program Directors and Technology-to-Market advisers will continue to visit performers regularly as part of ARPA-E's hands-on engagement, which is the primary component of ARPA-E travel. The number of site visits will be commensurate with the number of ongoing projects.	- \$950,000: Travel will decrease as projects close-out.
Support Services		
At the FY 2020 Enacted level, ARPA-E anticipates maintaining the use of support service contractors to support ARPA-E federal staff in the management and oversight of projects and other required functions. The level of support is commensurate to the number of ongoing and anticipated projects.	At the FY 2021 Request level, ARPA-E anticipates decreasing support service contractors as projects reach end dates. Support service contractors will continue to support ARPA-E federal staff in the management and oversight of projects and other required functions.	- \$8,700,000: Decrease from FY 2020 levels due to project closeouts.
Other Related Expenses		
The FY 2020 Enacted level for other related expenses primarily consists of Working Capital Fund and Information Technology support costs, which are commensurate with the level of FTEs and support services requested.	The FY 2021 Request level for other related expenses primarily consists of Working Capital Fund and Information Technology support costs, which are commensurate with the level of FTEs and support services requested.	-\$2,050,000: Decrease in WCF and other overhead due to project and staffing reductions.

**Advanced Research Projects Agency - Energy
Research and Development (\$K)**

	FY 2019 Enacted	FY 2020 Enacted	FY 2021 Request	FY 2021 Request vs FY 2020 Enacted
Basic	0	0	0	0
Applied	167,375	195,000	0	-195,000
Development	167,375	195,000	0	-195,000
Subtotal, R&D	334,750	390,000	0	-390,000
Equipment	0	0	0	0
Construction	0	0	0	0
Subtotal, R&D	334,750	390,000	0	-390,000
Cancellation of Prior Year ARPA-E Project Funds	0	0	-332,000	-332,000
Total, R&D	334,750	390,000	-332,000	-722,000

**Advanced Research Projects Agency - Energy
Small Business Innovation Research/Small Business Technology Transfer (SBIR/STTR) (\$K)**

	FY 2019 Enacted	FY 2020 Enacted	FY 2021 Request*
ARPA-E Projects			
SBIR	10,712	12,480	0
STTR	1,506	1,755	0
Total, SBIR/STTR	12,218	14,235	0

*In FY 2021, ARPA-E will not invest in new R&D technologies and as such will not make additional Small Business Innovation Research / Small Business Technology Transfer (SBIR/STTR) program investments

DEPARTMENT OF ENERGY
 Funding by Site Detail
 TAS_0337 - ARPA-E BY2021
 (Dollars in Thousands)

FY 2019 Enacted	FY 2020 Enacted	FY 2021 Request
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Washington Headquarters

ARPA-E Projects	334,750	390,000	0
Program Direction - ARPA-E	31,250	35,000	21,256
Advanced Research Projects Agency - Energy Programs	366,000	425,000	21,256
Total Washington Headquarters	366,000	425,000	21,256